



# EARLY WARNING SYSTEMS (EWS) MAPPING EXERCISE ACROSS CENTRAL ASIA

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# Early Warnings for All: Background

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- Early Warning Systems (EWS) are a proven, effective and cost-efficient climate adaptation and disaster risk management measure
- EWS deliver financial benefits & a 10-fold return on investment
- Half of countries globally are not protected by EWS
- According to the SFM, countries with MHEWS in Asia and the Pacific have increased from 25% in 2015 to 60% in 2022, but many people are still not reached
- **EW4All: UN SG initiative to achieve universal coverage of EWS by 2027**

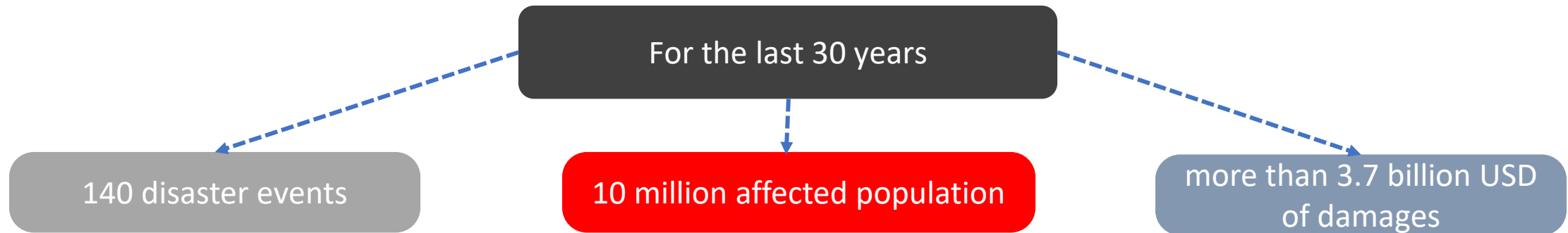
“ Today, one third of the world’s people [...] are still not covered by early warning systems... This is unacceptable, particularly with climate impacts sure to get even worse. To that end, I announce the United Nations will spearhead new action to ensure every person on Earth is protected by early warning systems within five years. ”



UN Secretary General Antonio Guterres  
On World Meteorological Day  
March 2022



# Cross-border hazard & risks in Central Asia



- 40 million of the region's 75 million people live under constant threat from earthquakes, mudslides and floods.
- Threats are transboundary in nature and their consequences can affect the territory of several states at once.



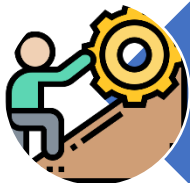
# EWS MAPPING ACROSS CA - OBJECTIVES



To identify key EWS stakeholders at all levels (local, national, regional)



To understand the current context of EWS in the countries and the region following their unique challenges and opportunities



To outline key gaps and challenges while communicating and disseminating warnings and translating early warnings into risk-informed early action



To provide recommendations for improving existing EWS at the national and regional level.



# Who are the Key Stakeholders?

-  National Disaster Risk Management Agencies
-  National Hydrometeorological Services
-  National Seismological Services
-  Key sectoral ministries
-  Research and development institutions/Academia
-  Local governance
-  Private sector
-  Communities/CSOs
-  Regional/ International organizations



# General Findings – Gaps & Challenges



- The prevailing approach to disaster risk management is reactive, with inadequate integration of risk information into decision-making across sectors.
- The Early Warning process is fragmented and has not been adequately recognized across the four pillars.
- There is a lack of sufficient financial and technological support for EWS.
- Early warning is not sufficiently mainstreamed into the development policies.
- Impact-based early warning/forecasting is in the conceptual phase.



- Insufficient disaster risk understanding and knowledge and integration of risk-related information.
- Limited emphasis on social, economic and environmental vulnerability.
- Anticipation of new and emerging risks and taking consequent actions.
- Inadequate inclusion of biological hazards within Early Warning Systems.



- Insufficient monitoring and forecasting capacities and services.
- The extent of automatization and utilization of digital solutions and services for early warning and alerting.
- Localization of forecasting information.
- Insufficiency of resources, both human and material-technical.





# Warning dissemination/communication



Television



Radio



Internet/official webpages



Short Message Service



Social media platforms



Public alert system



Speakers/sirens in communities



Word of mouth



- Ambiguity in the early warning communication and dissemination.
- Absence of specific hazard-related reaction models for different categories of population.
- Inadequate public awareness and education for early warning and alerting understanding.
- Insufficient engagement of the private sector and media.



- Absence of gender and disability mainstreaming into the early warning and alerting processes.
- Periodic conduct of training drills with stakeholders and communities.
- Insufficient funding for upgrading tools and equipment, developing new technologies and training specialists.
- Absence of anticipatory actions incl. pre-arranged financing mechanisms applied in the communities.



# EWS Good Practices in Central Asia (National)

- “Enhancing Multi-Hazard Early Warning System to Increase Resilience of Uzbekistan Communities to Climate Change Induced Hazards” project.
- EWS of the Lake Sarez in Tajikistan.
- National integrated system of information and warning of the population (OKSION) in the Kyrgyz Republic.
- Earthquake and mudflow EWS in the City of Almaty in Kazakhstan.
- Mobile applications: Darmen (KAZ), SOS (TAJ).
- Pilot project MoES – Kazakh Telecom on application of Cell Broadcast System for emergency notification (12-20 seconds before event).



# EWS Good Practices in Central Asia (Regional)

- “Climate Change and Sustainability in Central Asia” regional project.
- Central Asia Region Flash Flood Guidance System.
- CESDRR Initiatives: Regional Early Warning System for earthquakes/Regional Early Warning and Mutual Information System for disaster threats and occurrence.
- #EW4All Initiative in Tajikistan.



# The Way Forward



- Proposed enhancements encompass all four pillars, targeting a combination of technical, normative, and institutional deficiencies. This aims to ensure that all community members at risk receive timely and accurate warnings and information regarding potential risks and threats.
- A paradigm shift is advocated for proactive disaster risk management, involving the prevention of existing risks and the anticipation of emerging ones, while making risk-informed decisions.
- The value chain of Early Warning Systems is to be fortified.
- Contribution will be made to the #EW4All initiative across the region, focusing on replication and scaling up.
- Support the transition of existing EWS in the countries toward impact-based early warning.



# The Way Forward



- Develop the essential capacities and provide the necessary resources for a fully integrated early warning and alerting system, coupled with adequate financing.
- Advancing digitalization and automation of early warning systems and processes.
- Integration of new communication channels and services for warning dissemination.
- Foster greater integration of local Disaster Risk Reduction stakeholders into the early warning and alerting system.
- Guarantee that early warning and alerting systems are gender-sensitive and inclusive of individuals with disabilities.



Thank you.



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